

## Syllabus & Course

<b>Course Name</b>	: Machine Learning
<b>Duration</b>	: Weekend (8 weekends) / Weekday (5 weeks)
<b>Delivery Mode</b>	: Classroom/Online
<b>Key Features</b>	: 500+ Quizzes, Lab Exercises, Projects, Online Account on SDL Cloud
<b>Training Kit</b>	: All course related software, Notes, Practice Question & Others

## Python with Machine Learning

### Machine Learning

#### Introduction to Machine Learning

- Machine learning
- Overview about scikit-learn package
- Types of ML
- Basic Steps of ML
- ML Algorithms

#### Data Pre-processing

- Dealing with missing data
- Identifying missing values
- Imputing missing values
- Drop samples with missing values
- Handling with categorical data
- Nominal and Ordinal features
- Encoding class labels

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- One hot encoding
- Split data into training and testing sets
- Feature scaling

### Machine Learning Classifiers

- Introduction to Pandas
- K-Nearest Neighbours (KNN)
- Decision tree
- Random forest
- Support vector machines (SVM)
- Naive Bayes
- Logistic Regression
- Email Spam Filtering Project

### Regression Based Learning

- Simple Regression
- Multiple Regression
- Predicting house prices with Regression

### Clustering Based Learning

- Definition
- Types of clustering
- The k-means clustering algorithm

### Natural Language Processing

- Install nltk
- Tokenize words
- Tokenizing sentences
- Stop words with NLTK

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- Stemming words with NLTK
- Twitter Sentiment analysis Project

### Working with OpenCV

- Installing openCV
- Reading and writing images
- Applying image filters
- Writing text on images
- Image Manipulations
- Face detection Project
- Speech Recognition Project

End of Content

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